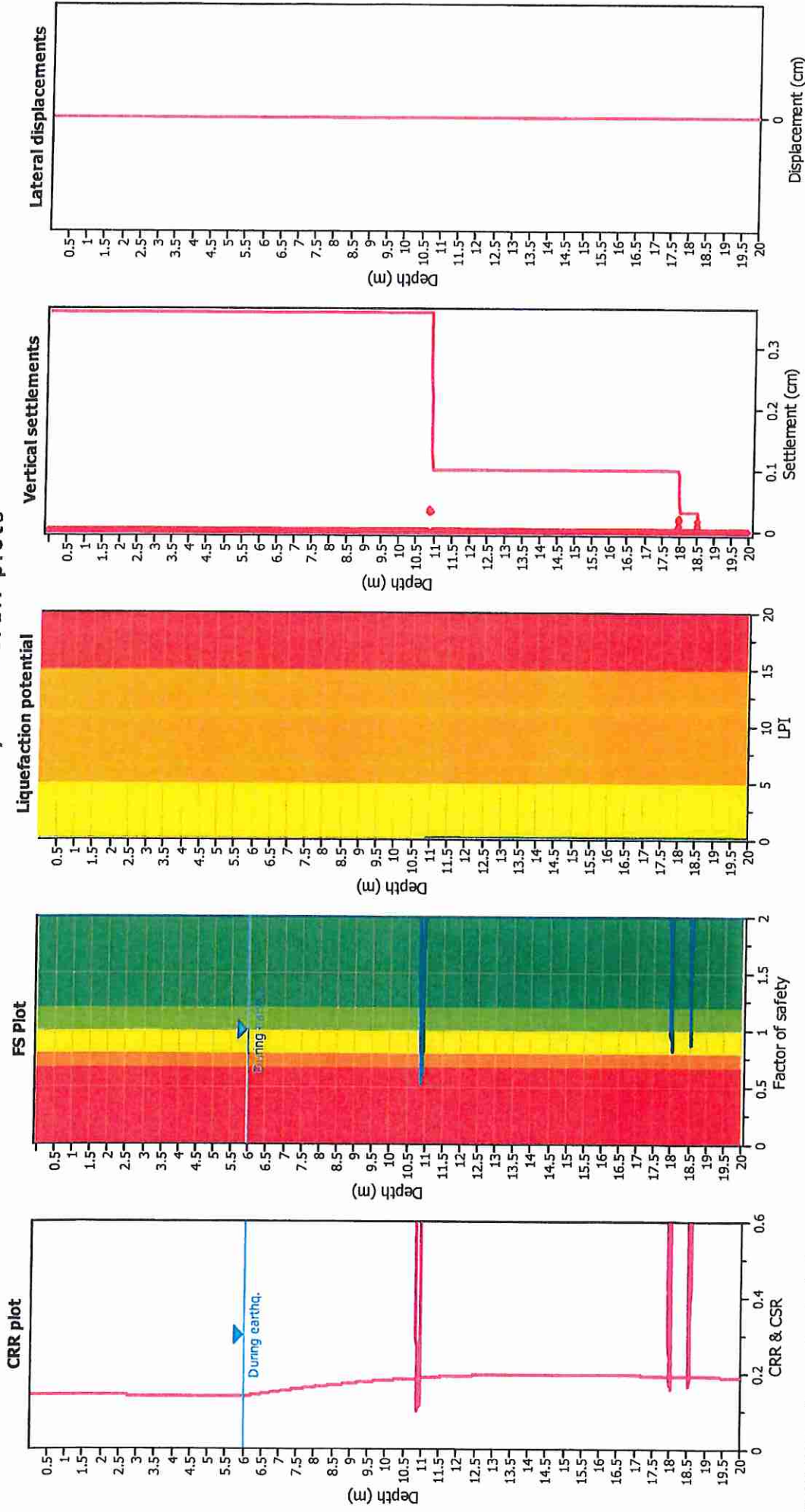


Appendix 6

Liquefaction Analysis Result Sheets

Liquefaction analysis overall plots



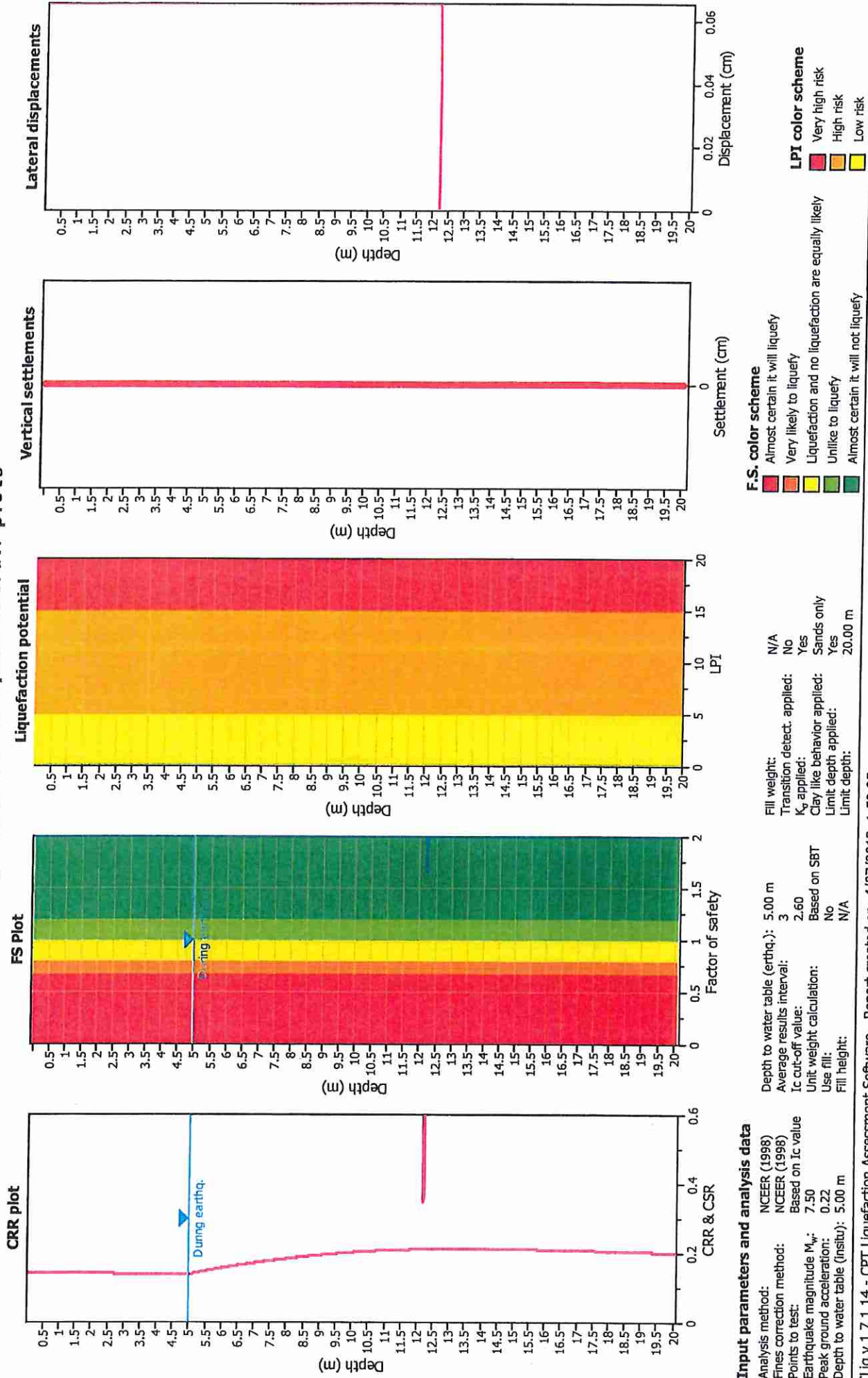
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	6.00 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_p applied:	Yes
Earthquake magnitude M_w :	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (Insttu):	6.00 m	Fill height:	N/A	Limit depth:	20.00 m

F.S. color scheme	
Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liquefaction are equally likely
Light Green	Unlikely to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme	
Red	Very high risk
Orange	High risk
Yellow	Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on Ic value
 Earthquake magnitude M_w : 7.50
 Peak ground acceleration: 0.22
 Depth to water table (insitu): 5.00 m

Depth to water table (earthq.): 5.00 m
 Average results interval: 3
 Ic cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect. applied: No
 K_0 applied: Yes
 Clay like behavior applied: Sands only
 Limit depth applied: Yes
 Limit depth: 20.00 m

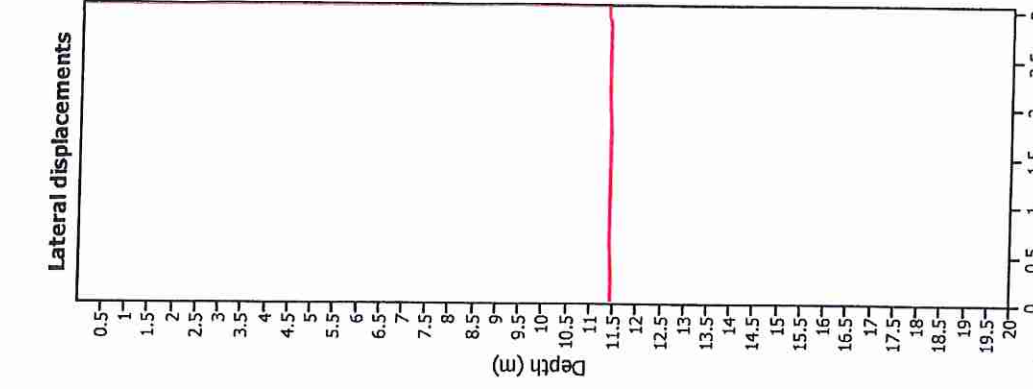
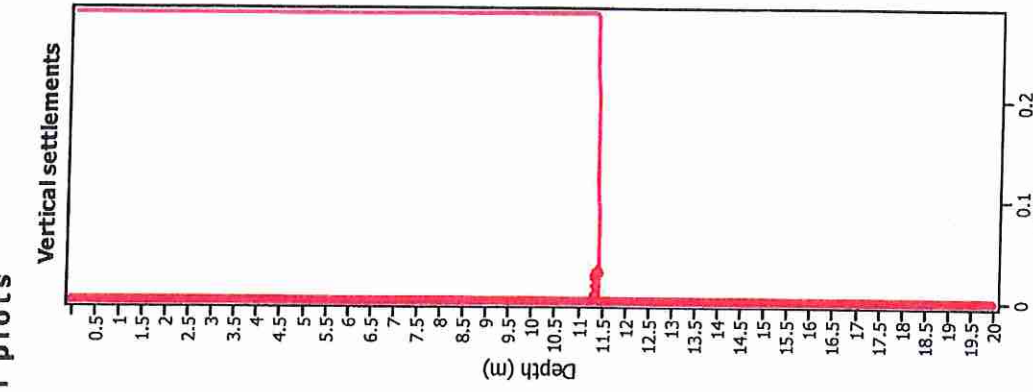
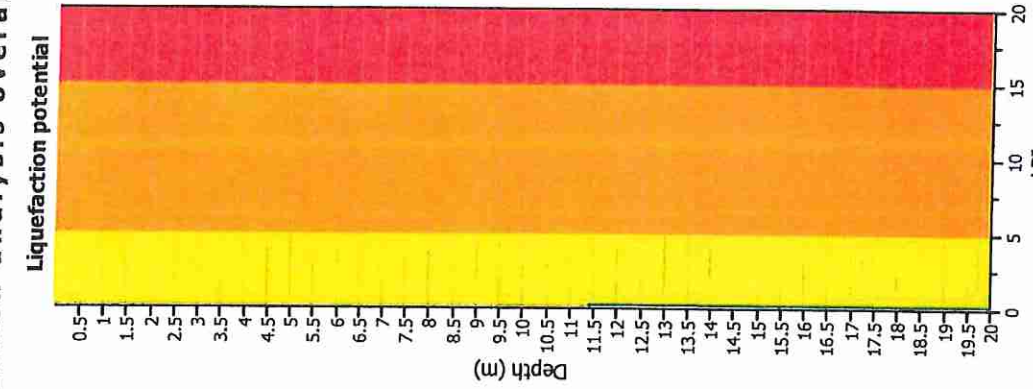
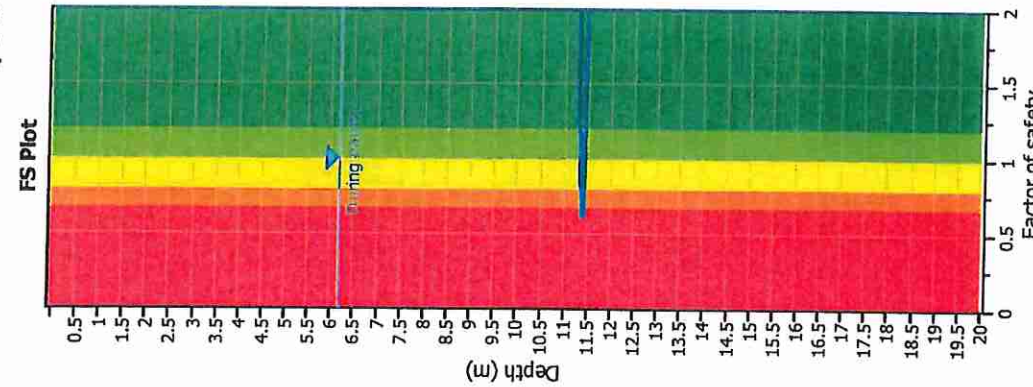
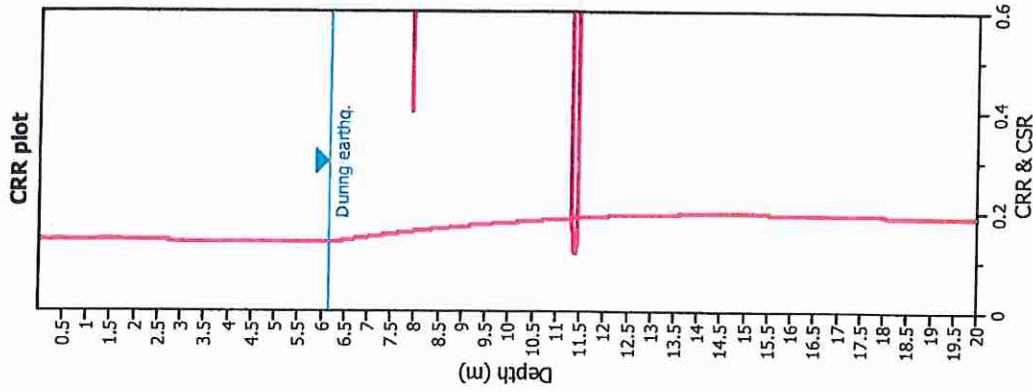
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlikely to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on I_c value
 Earthquake magnitude M_w : 7.50
 Peak ground acceleration: 0.22
 Depth to water table (insitu): 6.20 m

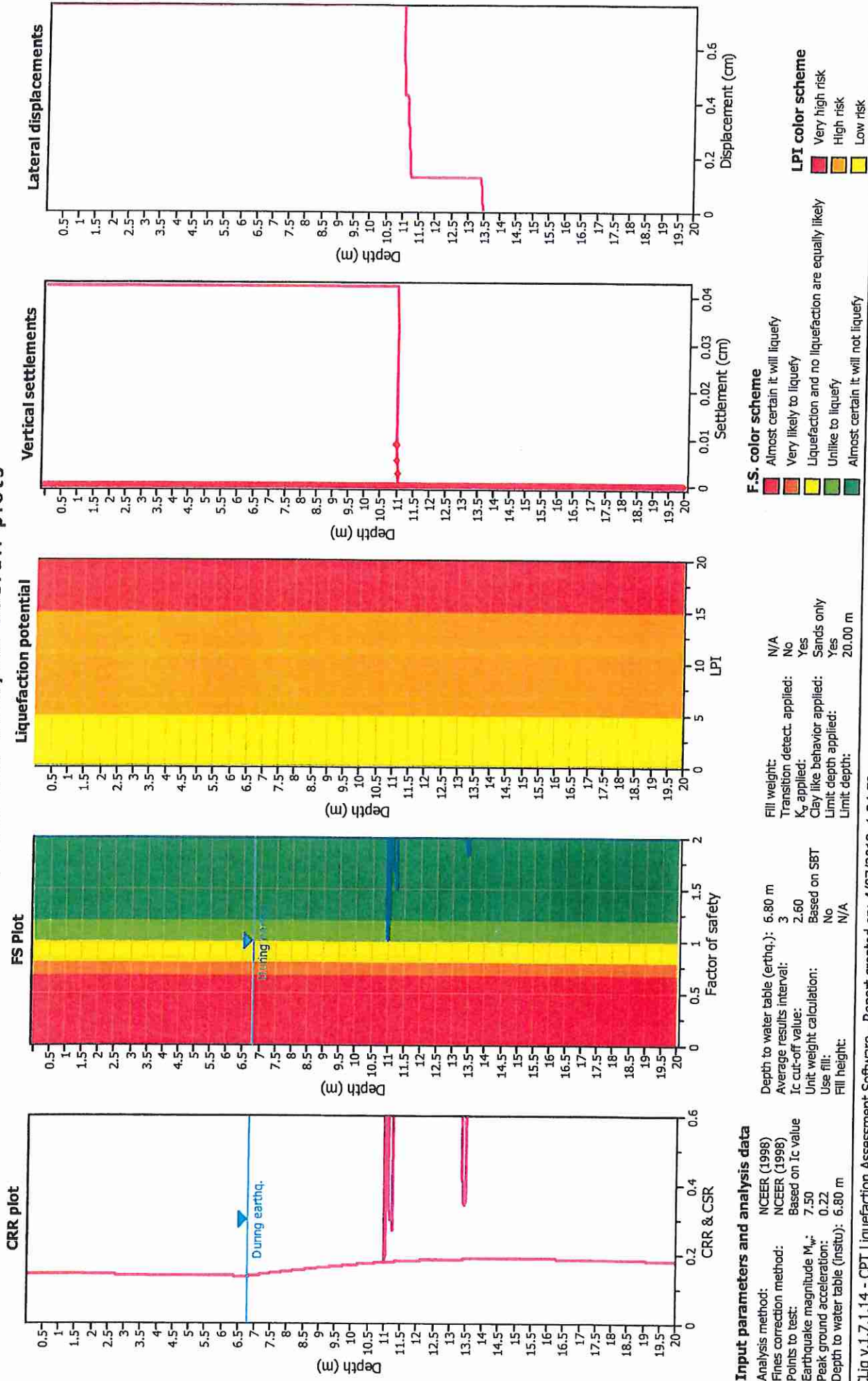
Depth to water table (earthq.): 6.20 m
 Average results interval: 3
 I_c cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect. applied: No
 K_0 applied: Sands only
 Clay like behavior applied: Yes
 Limit depth applied: 20.00 m

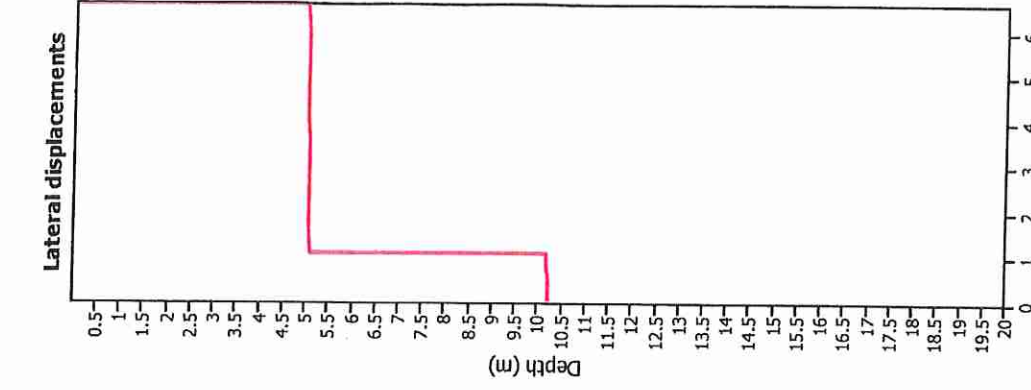
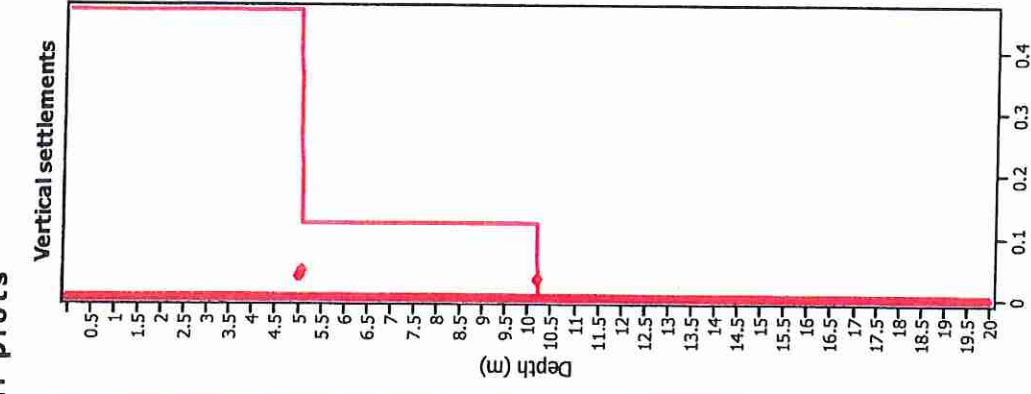
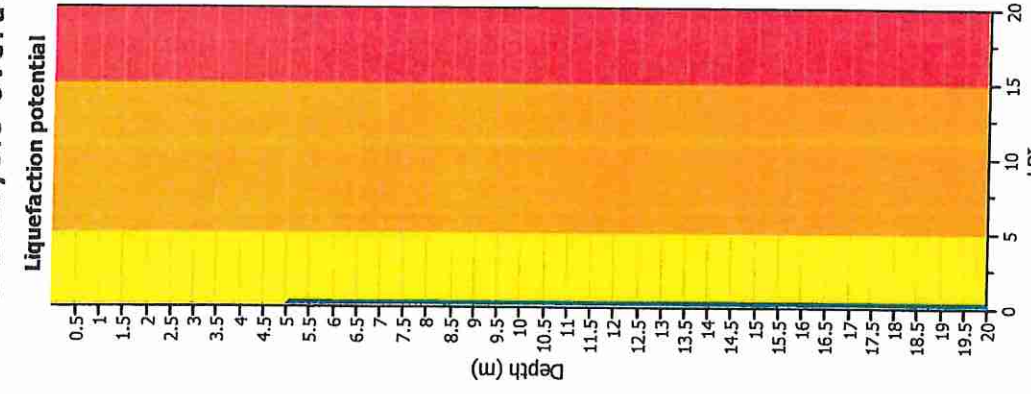
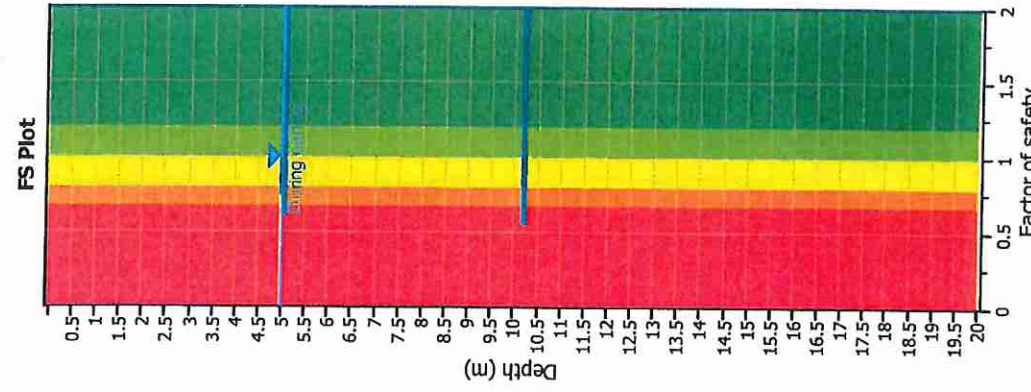
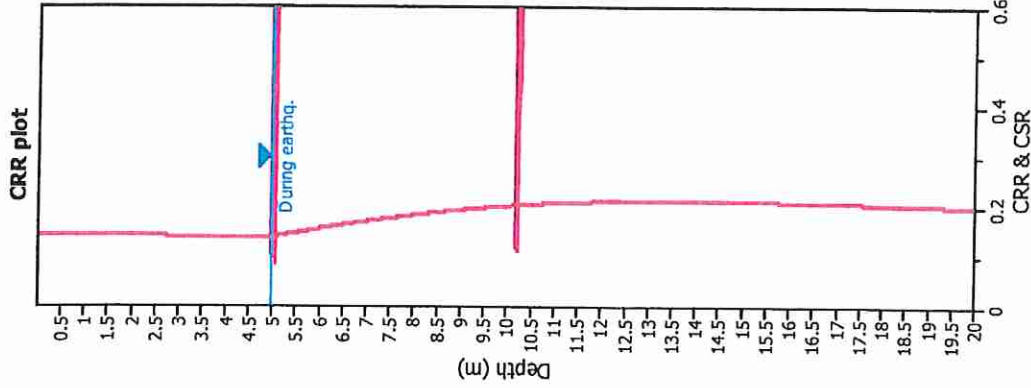
F.S. color scheme
 Almost certain it will liquefy
 Very likely to liquefy
 Liquefaction and no liquefaction are equally likely
 Unlikely to liquefy
 Almost certain it will not liquefy

LPI color scheme
 Very high risk
 High risk
 Low risk

Liquefaction analysis overall plots



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on Ic value
 Earthquake magnitude M_w : 7.50
 Peak ground acceleration: 0.22
 Depth to water table (Institu): 5.00 m

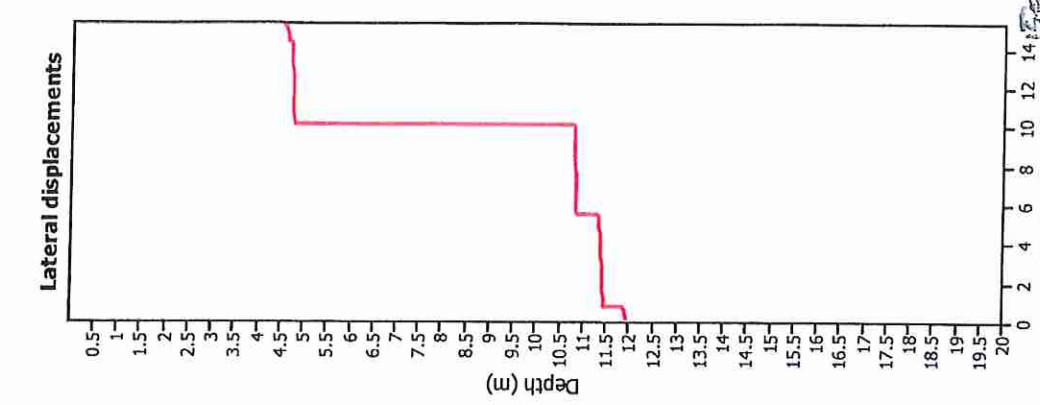
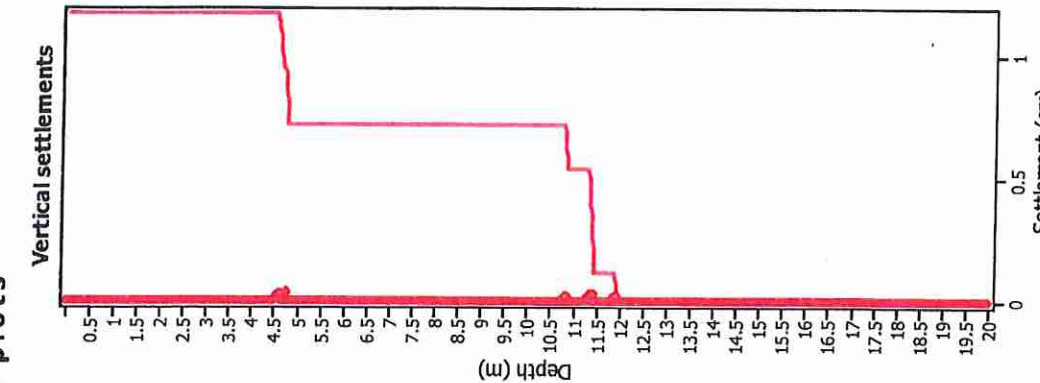
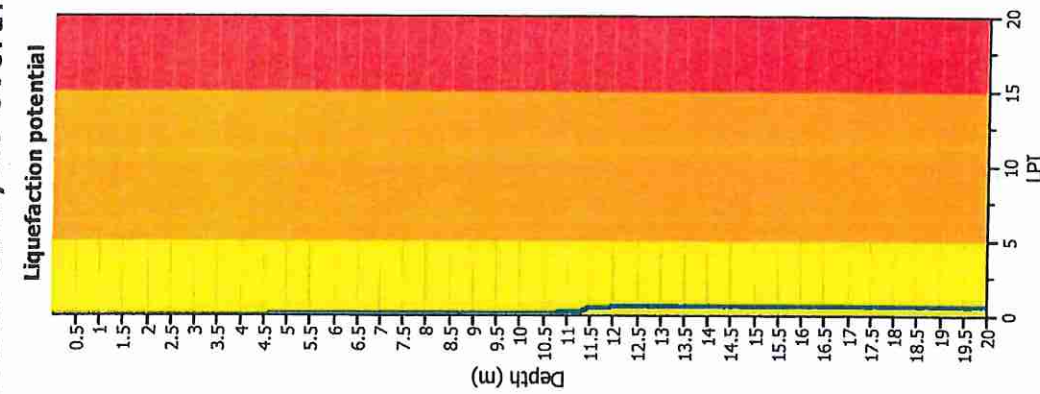
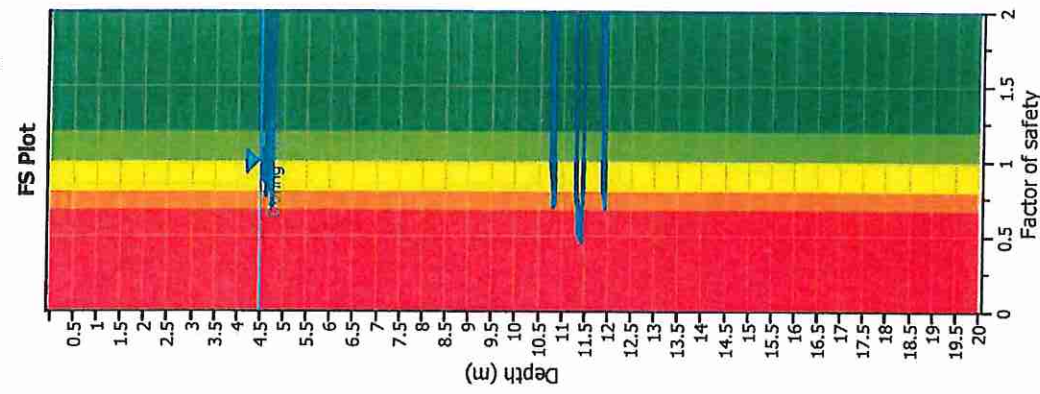
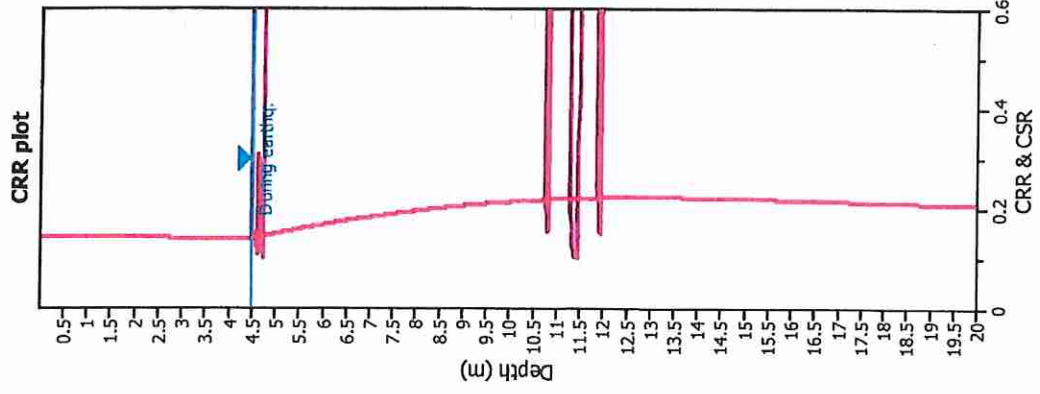
Depth to water table (earthq.): 5.00 m
 Average results interval: 3
 Ic cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect. applied: No
 K_g applied: Yes
 Clay like behavior applied: Sands only
 Limit depth applied: Yes
 Limit depth: 20.00 m

F.S. color scheme
 Almost certain it will liquefy
 Very likely to liquefy
 Liquefaction and no liquefaction are equally likely
 Unlike to liquefy
 Almost certain it will not liquefy

LPI color scheme
 Very high risk
 High risk
 Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on I_c value
 Earthquake magnitude M_w: 7.50
 Peak ground acceleration: 0.22
 Depth to water table (insitu): 4.50 m

Depth to water table (earthq): 4.50 m
 Average results interval: 3
 I_c cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect: applied: No
 K_σ applied: Yes
 Clay like behavior: applied: Sands only
 Limit depth: applied: Yes
 Limit depth: 20.00 m

F.S. color scheme

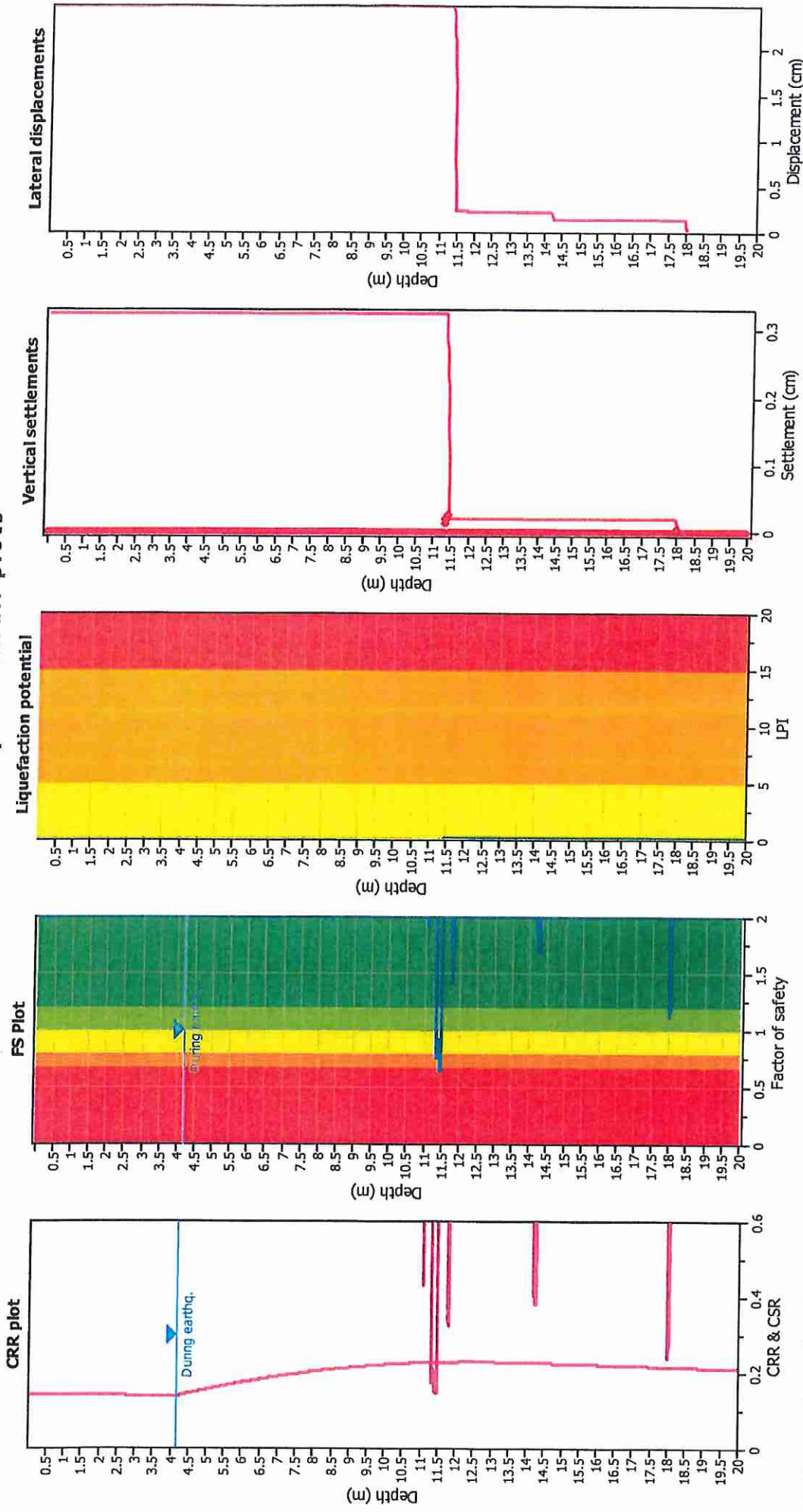
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlikely to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Lateral spread at 12m from bottom line

Liquefaction analysis overall plots



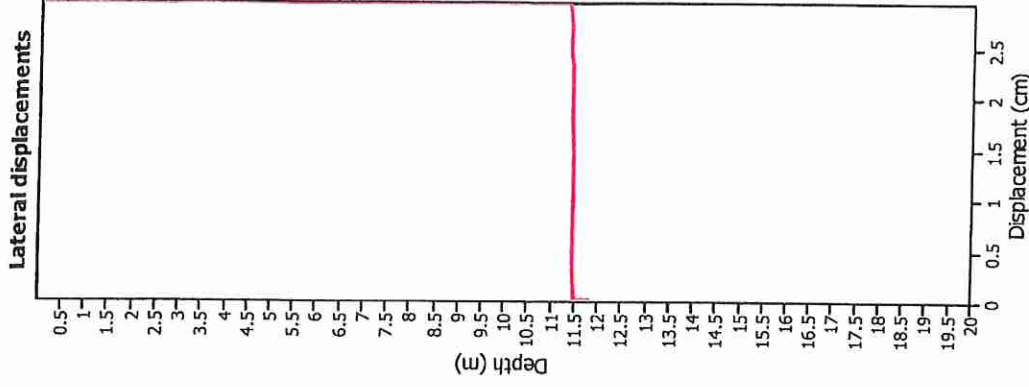
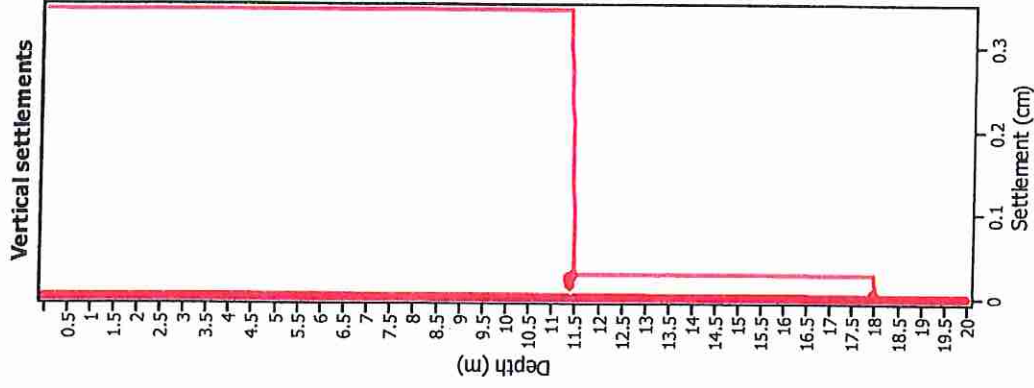
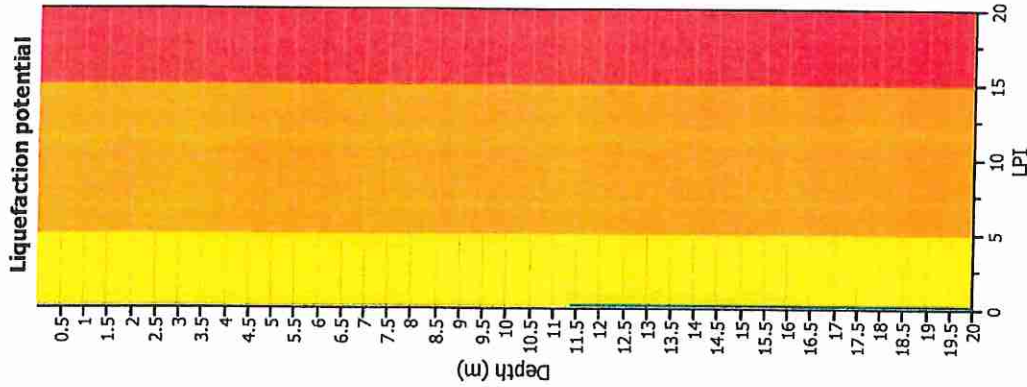
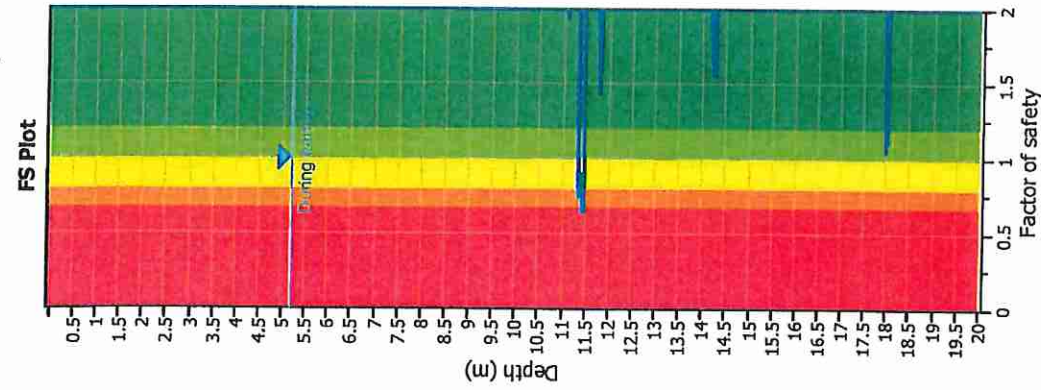
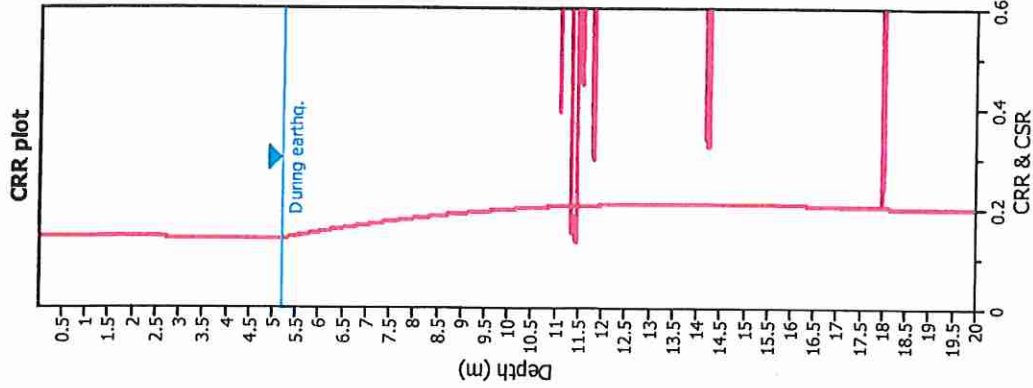
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	4.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I _c value	I _c cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	N/A	Limit depth applied:	No
Depth to water table (in situ):	4.20 m	Fill height:	N/A	Limit depth:	N/A

CLiQ v.1.7.1.14 - CPT Liquefaction Assessment Software - Report created on: 4/07/2013, 1:41:39 p.m.

Project file: H:\20000 - 20999\20500 - The Lakes 2012, Stage 2H(Geotech)\Liquefaction\Stage 2H The Lakes.cq

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on I_c value
 Earthquake magnitude M_w: 7.50
 Peak ground acceleration: 0.22
 Depth to water table (insitu): 5.20 m

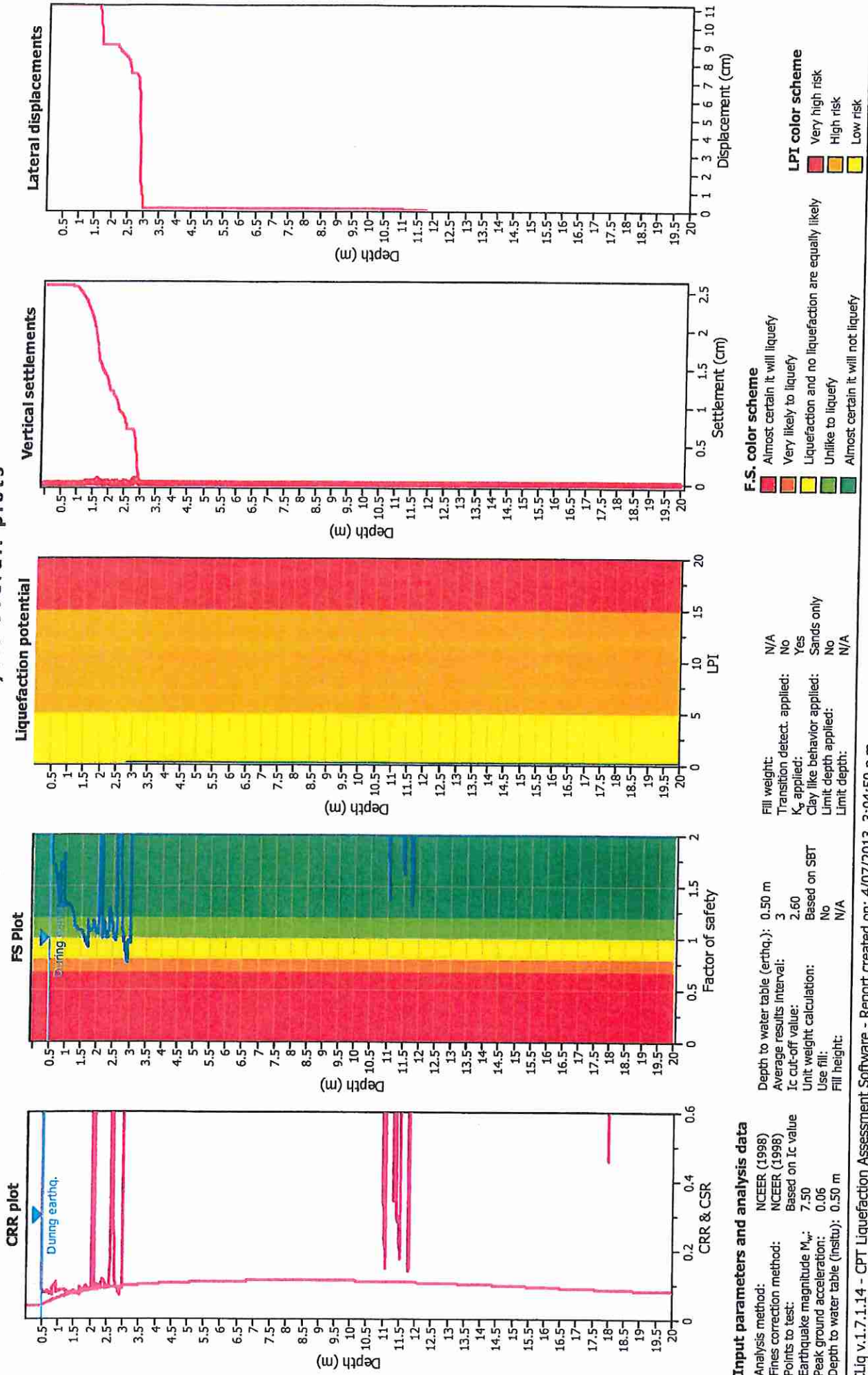
Depth to water table (earthq.): 5.20 m
 Average results interval: 3
 I_c cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect. applied: No
 K_g applied: Yes
 Clay like behavior applied: Sands only
 Limit depth applied: No
 Limit depth: N/A

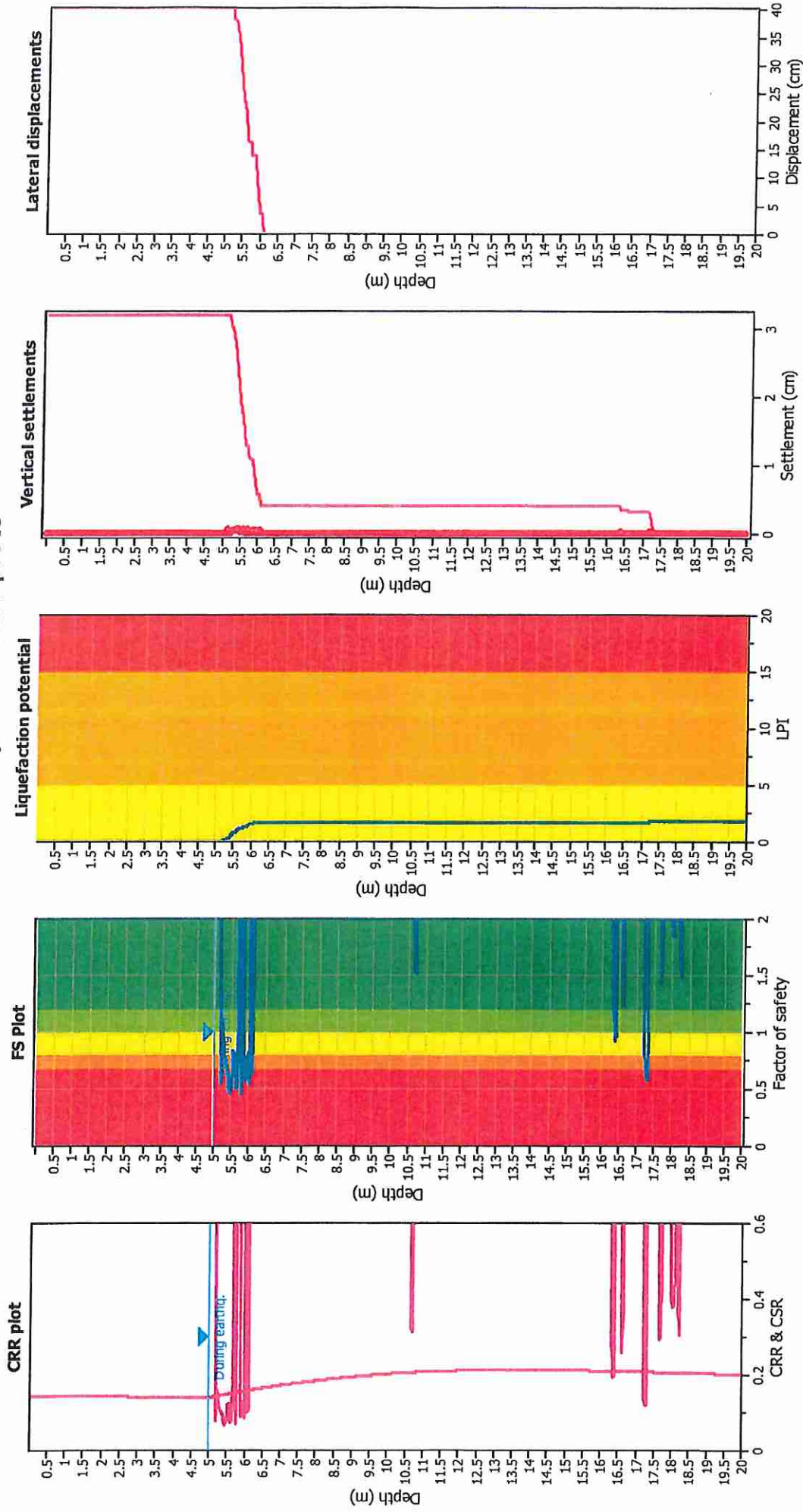
F.S. color scheme
 Almost certain it will liquefy
 Very likely to liquefy
 Liquefaction and no liquefaction are equally likely
 Unlike to liquefy
 Almost certain it will not liquefy

LPI color scheme
 Very high risk
 High risk
 Low risk

Liquefaction analysis overall plots



Liquefaction analysis overall plots

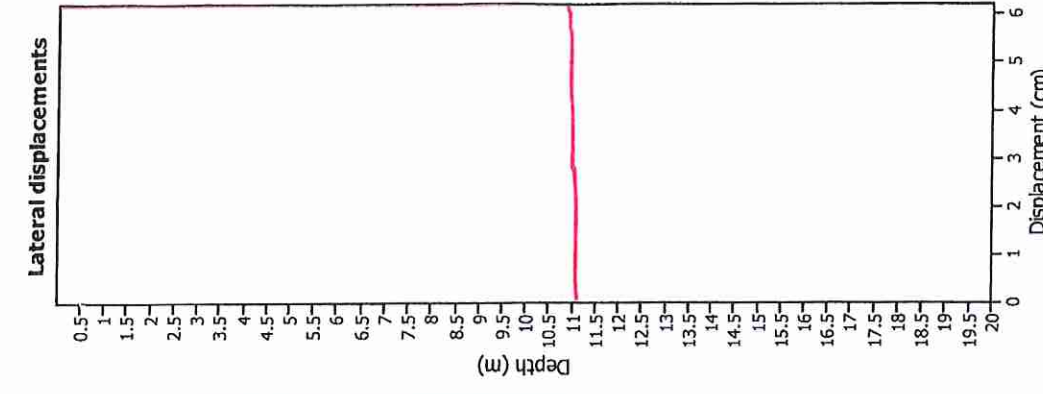
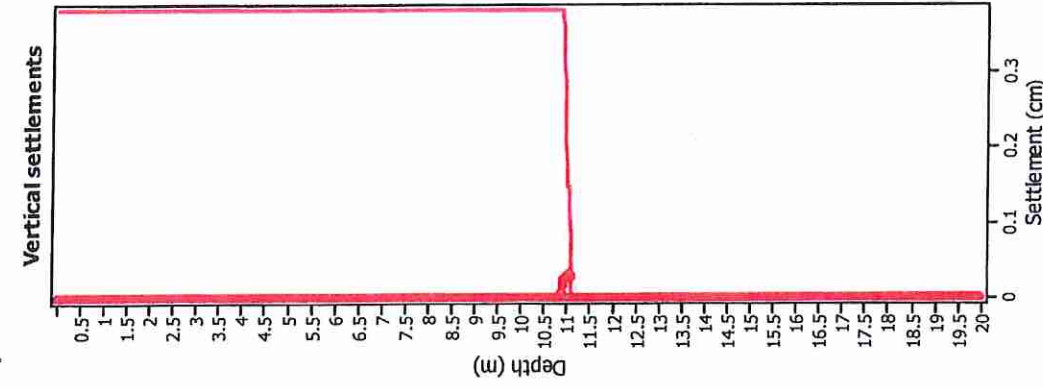
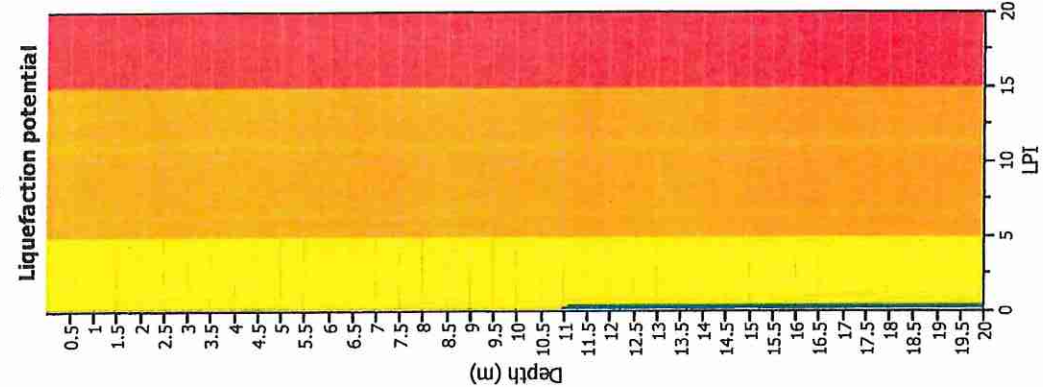
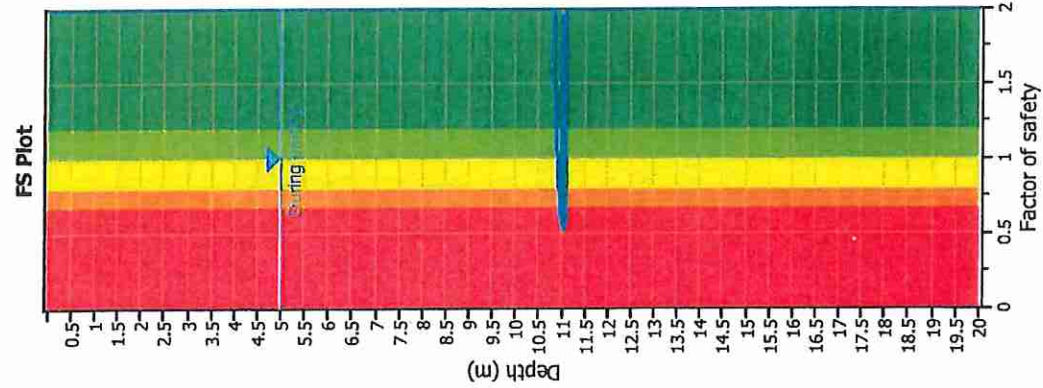
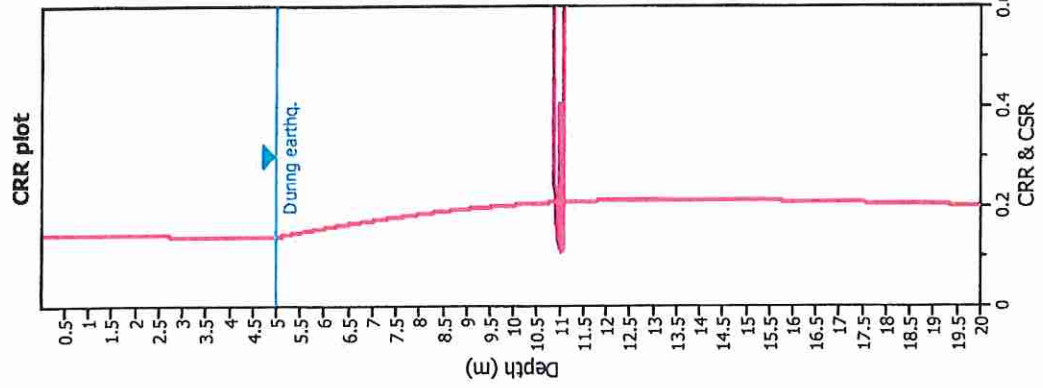


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	5.00 m
Fines correction method:	NCEER (1998)	Average results interval:	3
Points to test:	Based on I_c value	I_c cut-off value:	2.60
Earthquake magnitude M_w :	7.50	Unit weight calculation:	Based on SBT
Peak ground acceleration:	0.22	Use fill:	No
Depth to water table (nistry):	5.00 m	Fill height:	N/A
		Limit depth:	N/A
		Clay like behavior applied:	Sands only
		Transition detect. applied:	No
		K_c applied:	Yes
		Fill weight:	N/A
		Liquefaction and no liquefaction are equally likely	Yes
		Unlikely to liquefy	No
		Almost certain it will not liquefy	N/A

█	Almost certain it will liquefy	█	Very high risk
█	Very likely to liquefy	█	High risk
█	Liquefaction and no liquefaction are equally likely	█	Low risk
█	Unlikely to liquefy		
█	Almost certain it will not liquefy		

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on ic value
 Earthquake magnitude M_w : 7.50
 Peak ground acceleration: 0.22
 Depth to water table (insitu): 5.00 m

Depth to water table (earthq.): 5.00 m
 Average results interval: 3
 Ic cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A

Fill weight: N/A
 Transition detect. applied: No
 K_{σ} applied: Yes
 Clay like behavior applied: Sands only
 Limit depth applied: Yes
 Limit depth: 20.00 m

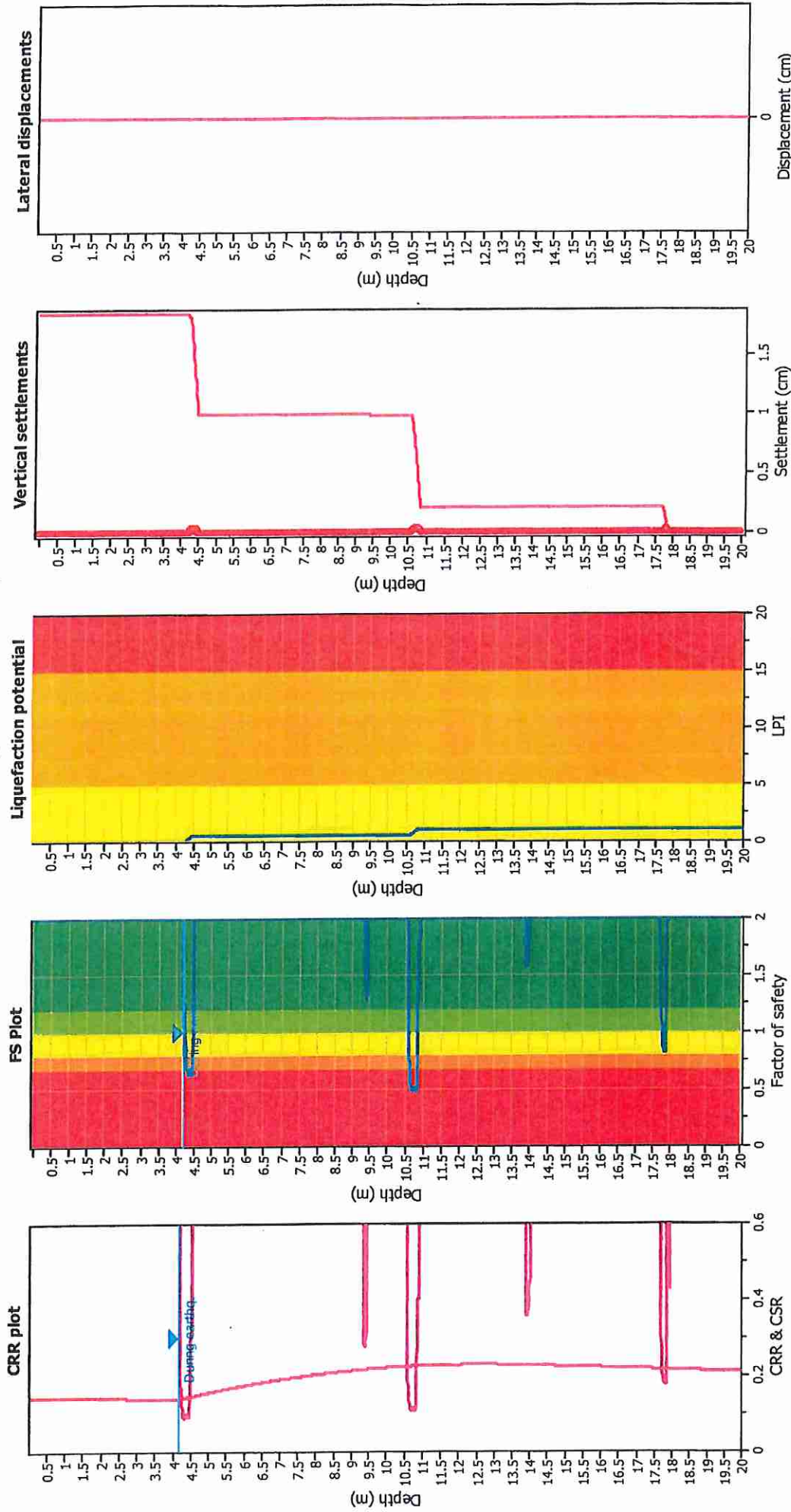
F.S. color scheme

Almost certain it will liquefy
 Very likely to liquefy
 Liquefaction and no liquefaction are equally likely
 Unlike to liquefy
 Almost certain it will not liquefy

LPI color scheme

Very high risk
 High risk
 Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
 Fines correction method: NCEER (1998)
 Points to test: Based on I_c value
 Earthquake magnitude M_w : 7.50
 Peak ground acceleration: 0.22
 Depth to water table (institu): 4.20 m

F.S. color scheme

Almost certain it will liquefy
 Very likely to liquefy
 Liquefaction and no liquefaction are equally likely
 Unlike to liquefy
 Almost certain it will not liquefy

LPI color scheme

Very high risk
 High risk
 Low risk

Fill weight:

Transition detect. applied: N/A
 K_0 applied: No
 Clay like behavior applied: Sands only
 Limit depth applied: Yes
 Limit depth: 20.00 m

Depth to water table (earthq.): 4.20 m
 Average results interval: 3
 I_c cut-off value: 2.60
 Unit weight calculation: Based on SBT
 Use fill: No
 Fill height: N/A